

Western Pre-Aptian Reservoirs, Assessment Unit 60290101
Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Field Type	MFS	Prob. (0-1)	Undiscovered Resources												Largest Undiscovered Field (MMBO or BCFG)			
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)				F95	F50	F5	Mean
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean				
Oil Fields	1	1.00	8	28	63	31	15	54	132	61	1	2	6	2	3	6	19	8
Gas Fields	6						30	96	216	106	1	2	5	2	17	36	81	40
Total		1.00	8	28	63	31	45	150	348	168	1	4	10	5				

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Forecast: Oil in Oil Fields

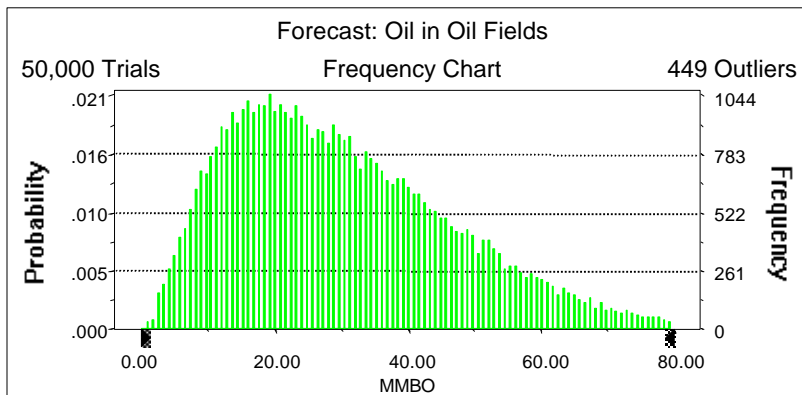
Summary:

Display range is from 0.00 to 80.00 MMBO

Entire range is from 1.06 to 141.06 MMBO

After 50,000 trials, the standard error of the mean is 0.08

Statistics:	Value
Trials	50000
Mean	30.72
Median	27.92
Mode	---
Standard Deviation	17.15
Variance	294.29
Skewness	0.80
Kurtosis	3.49
Coefficient of Variability	0.56
Range Minimum	1.06
Range Maximum	141.06
Range Width	140.00
Mean Standard Error	0.08



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	1.06
95%	8.08
90%	10.95
85%	13.30
80%	15.43
75%	17.43
70%	19.42
65%	21.41
60%	23.52
55%	25.62
50%	27.92
45%	30.22
40%	32.62
35%	35.28
30%	38.19
25%	41.30
20%	44.89
15%	49.20
10%	54.42
5%	62.78
0%	141.06

End of Forecast

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Forecast: Gas in Oil Fields

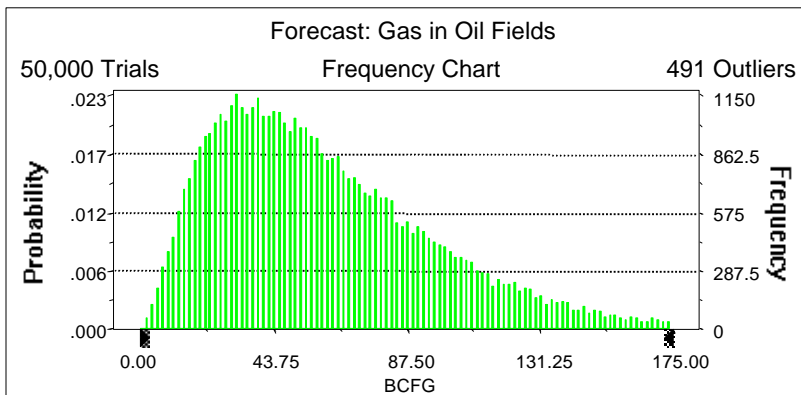
Summary:

Display range is from 0.00 to 175.00 BCFG

Entire range is from 1.43 to 356.00 BCFG

After 50,000 trials, the standard error of the mean is 0.17

Statistics:	Value
Trials	50000
Mean	61.35
Median	54.02
Mode	---
Standard Deviation	37.10
Variance	1,376.42
Skewness	1.07
Kurtosis	4.43
Coefficient of Variability	0.60
Range Minimum	1.43
Range Maximum	356.00
Range Width	354.57
Mean Standard Error	0.17



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	1.43
95%	14.99
90%	20.49
85%	25.09
80%	29.30
75%	33.25
70%	37.30
65%	41.30
60%	45.42
55%	49.70
50%	54.02
45%	58.54
40%	63.73
35%	69.13
30%	75.31
25%	81.99
20%	90.08
15%	99.63
10%	112.04
5%	132.08
0%	356.00

End of Forecast

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Forecast: NGL in Oil Fields

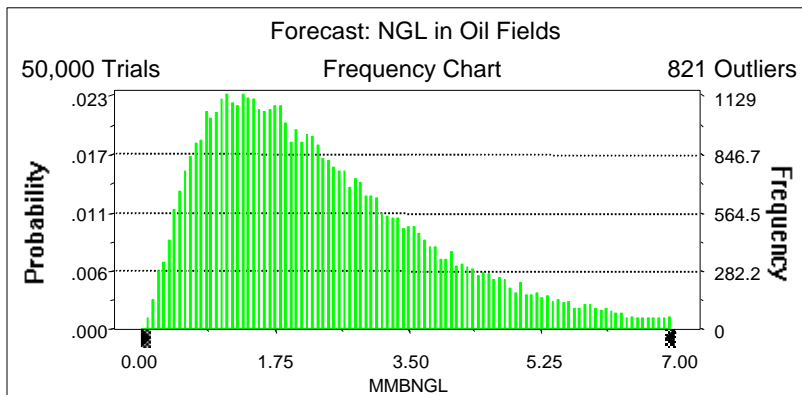
Summary:

Display range is from 0.00 to 7.00 MMBNGL

Entire range is from 0.05 to 15.70 MMBNGL

After 50,000 trials, the standard error of the mean is 0.01

Statistics:	Value
Trials	50000
Mean	2.46
Median	2.11
Mode	---
Standard Deviation	1.60
Variance	2.56
Skewness	1.31
Kurtosis	5.48
Coefficient of Variability	0.65
Range Minimum	0.05
Range Maximum	15.70
Range Width	15.65
Mean Standard Error	0.01



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.05
95%	0.56
90%	0.77
85%	0.95
80%	1.11
75%	1.27
70%	1.43
65%	1.59
60%	1.75
55%	1.92
50%	2.11
45%	2.29
40%	2.50
35%	2.73
30%	2.98
25%	3.27
20%	3.61
15%	4.04
10%	4.62
5%	5.56
0%	15.70

End of Forecast

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Forecast: Largest Oil Field

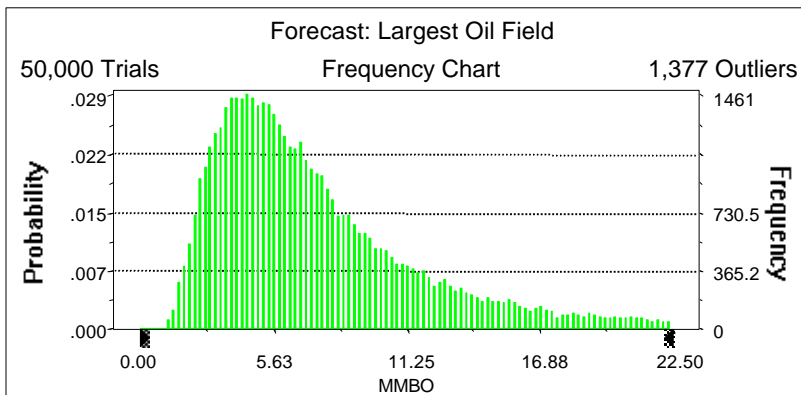
Summary:

Display range is from 0.00 to 22.50 MMBO

Entire range is from 1.06 to 34.98 MMBO

After 50,000 trials, the standard error of the mean is 0.02

Statistics:	Value
Trials	50000
Mean	7.90
Median	6.43
Mode	---
Standard Deviation	5.25
Variance	27.53
Skewness	1.86
Kurtosis	7.27
Coefficient of Variability	0.66
Range Minimum	1.06
Range Maximum	34.98
Range Width	33.92
Mean Standard Error	0.02



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	1.06
95%	2.57
90%	3.11
85%	3.57
80%	3.97
75%	4.36
70%	4.74
65%	5.14
60%	5.54
55%	5.96
50%	6.43
45%	6.92
40%	7.47
35%	8.08
30%	8.83
25%	9.71
20%	10.83
15%	12.32
10%	14.56
5%	18.79
0%	34.98

End of Forecast

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Forecast: Gas in Gas Fields

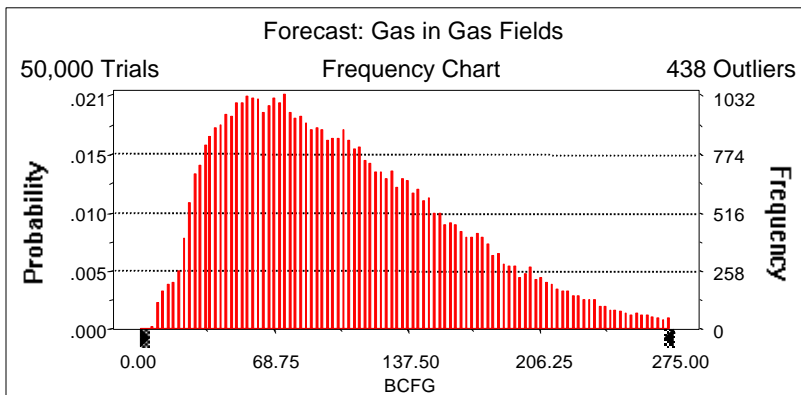
Summary:

Display range is from 0.00 to 275.00 BCFG

Entire range is from 7.13 to 421.57 BCFG

After 50,000 trials, the standard error of the mean is 0.26

Statistics:	Value
Trials	50000
Mean	106.18
Median	96.10
Mode	---
Standard Deviation	58.94
Variance	3,473.41
Skewness	0.84
Kurtosis	3.61
Coefficient of Variability	0.56
Range Minimum	7.13
Range Maximum	421.57
Range Width	414.44
Mean Standard Error	0.26



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	7.13
95%	29.84
90%	38.59
85%	46.12
80%	53.25
75%	59.95
70%	66.94
65%	73.80
60%	80.85
55%	88.33
50%	96.10
45%	104.33
40%	112.52
35%	121.66
30%	131.69
25%	142.54
20%	154.76
15%	169.70
10%	187.85
5%	216.34
0%	421.57

End of Forecast

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Forecast: NGL in Gas Fields

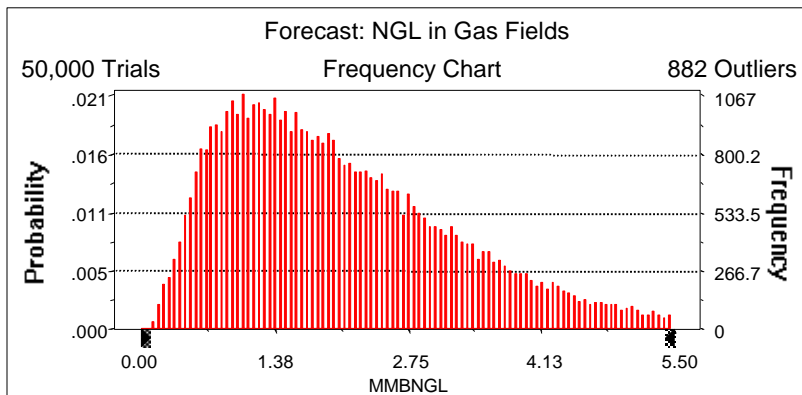
Summary:

Display range is from 0.00 to 5.50 MMBNGL

Entire range is from 0.10 to 11.72 MMBNGL

After 50,000 trials, the standard error of the mean is 0.01

Statistics:	Value
Trials	50000
Mean	2.12
Median	1.87
Mode	---
Standard Deviation	1.27
Variance	1.62
Skewness	1.08
Kurtosis	4.46
Coefficient of Variability	0.60
Range Minimum	0.10
Range Maximum	11.72
Range Width	11.62
Mean Standard Error	0.01



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.10
95%	0.55
90%	0.73
85%	0.88
80%	1.01
75%	1.15
70%	1.29
65%	1.42
60%	1.56
55%	1.71
50%	1.87
45%	2.02
40%	2.21
35%	2.40
30%	2.61
25%	2.84
20%	3.11
15%	3.44
10%	3.87
5%	4.55
0%	11.72

End of Forecast

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Forecast: Largest Gas Field

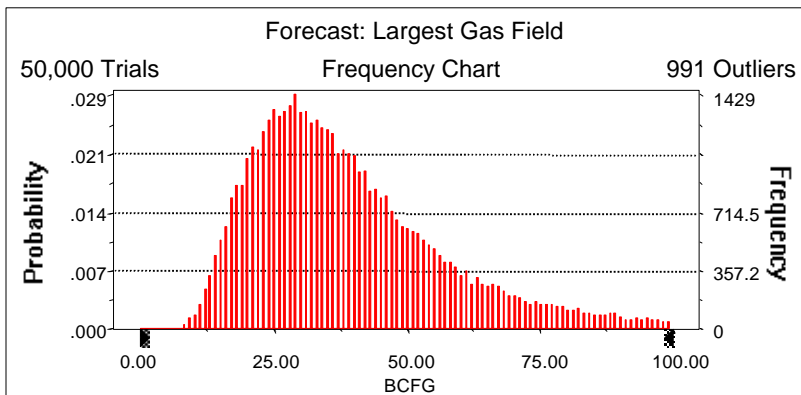
Summary:

Display range is from 0.00 to 100.00 BCFG

Entire range is from 7.13 to 149.87 BCFG

After 50,000 trials, the standard error of the mean is 0.09

Statistics:	Value
Trials	50000
Mean	40.50
Median	35.84
Mode	---
Standard Deviation	20.51
Variance	420.80
Skewness	1.55
Kurtosis	6.35
Coefficient of Variability	0.51
Range Minimum	7.13
Range Maximum	149.87
Range Width	142.74
Mean Standard Error	0.09



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	7.13
95%	16.89
90%	19.87
85%	22.22
80%	24.36
75%	26.27
70%	28.15
65%	29.94
60%	31.83
55%	33.79
50%	35.84
45%	38.03
40%	40.34
35%	42.88
30%	45.87
25%	49.31
20%	53.47
15%	58.83
10%	66.84
5%	80.91
0%	149.87

End of Forecast

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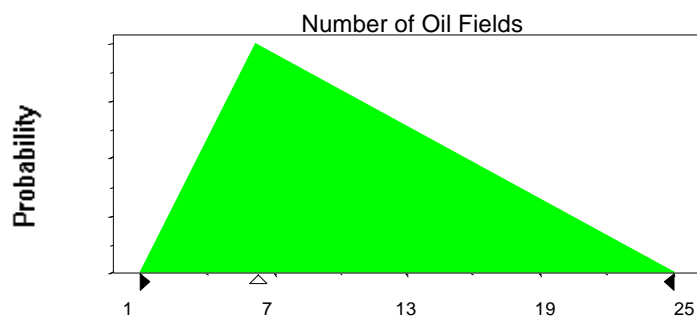
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	1
Likeliest	6
Maximum	25

Selected range is from 1 to 25
Mean value in simulation was 11



Assumption: Sizes of Oil Fields

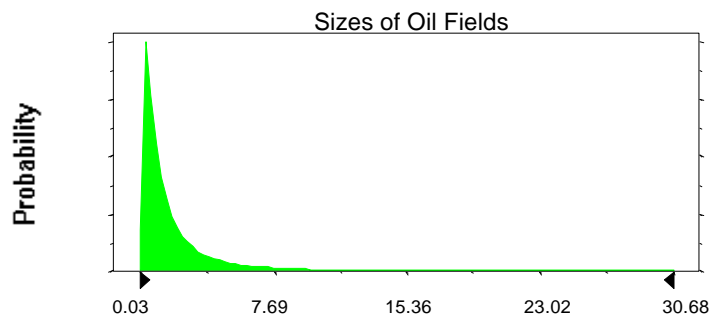
Lognormal distribution with parameters:

		Shifted parameters
Mean	1.92	2.92
Standard Deviation	3.14	3.14

Selected range is from 0.00 to 34.00	1.00 to 35.00
Mean value in simulation was 1.87	2.87

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Assumption: Sizes of Oil Fields (cont'd)



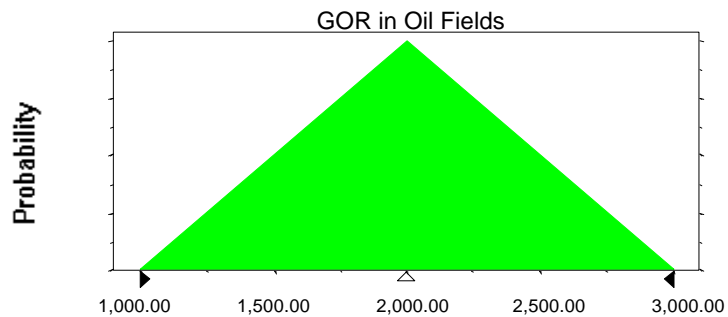
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,000.00
Likeliest	2,000.00
Maximum	3,000.00

Selected range is from 1,000.00 to 3,000.00

Mean value in simulation was 1,998.44



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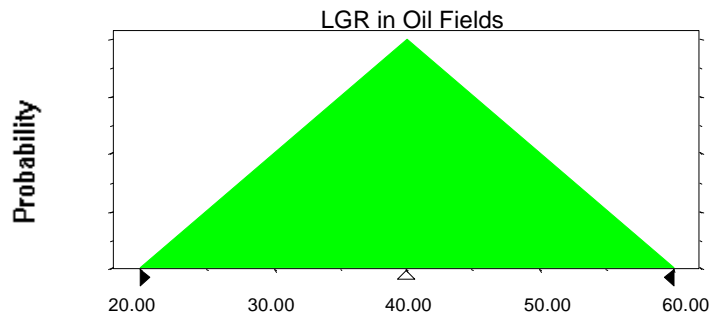
Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	20.00
Likeliest	40.00
Maximum	60.00

Selected range is from 20.00 to 60.00

Mean value in simulation was 40.03



Assumption: Number of Gas Fields

Triangular distribution with parameters:

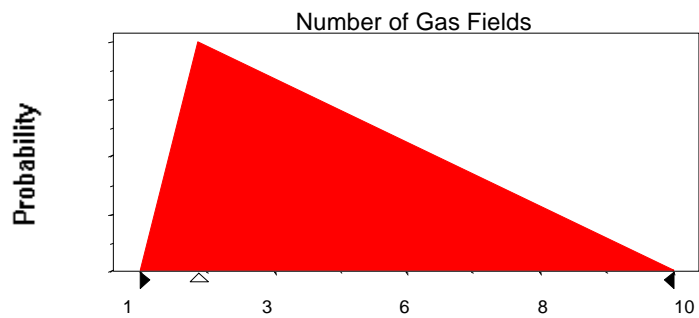
Minimum	1
Likeliest	2
Maximum	10

Selected range is from 1 to 10

Mean value in simulation was 4

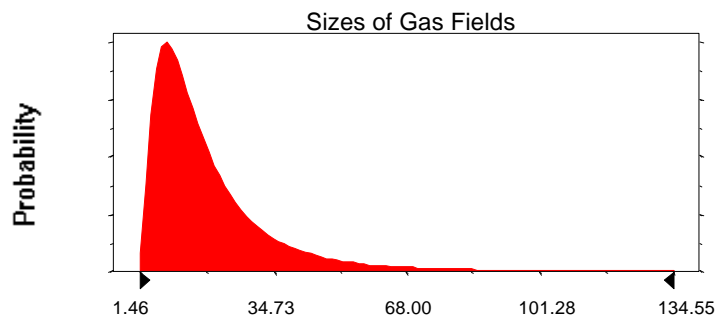
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:	Shifted parameters	
Mean	18.61	24.61
Standard Deviation	16.29	16.29
Selected range is from 0.00 to 144.00	6.00 to 150.00	
Mean value in simulation was 18.34	24.34	



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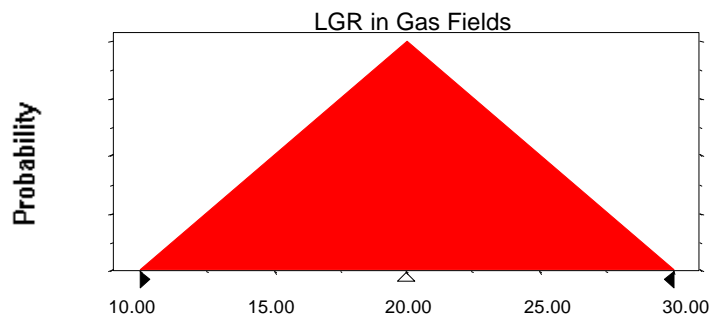
Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	10.00
Likeliest	20.00
Maximum	30.00

Selected range is from 10.00 to 30.00

Mean value in simulation was 20.01



End of Assumptions

Simulation started on 11/26/99 at 13:59:04

Simulation stopped on 11/26/99 at 14:15:02